Covid-19 Pool Testing

John Friedman (Updated April 11th 2020)

# US Navy Pool Testing

* Split sailors into groups, and Pool test each group.
  + If positive, sailors may be isolated, or evacuated
* Samples are collected onboard, then transported onshore for Pool testing.
* Medical Teams have a preventive medicine technician, preventative medicine officer, a microbiologist and medical laboratory technician
* ‘The two tests being utilized by the teams are the BioFire Film array, which tests for respiratory diseases, and the Step One RT-PCR System, which allows the team to perform more comprehensive coronavirus tests at sea.’
* As of March 14th, they’ve been testing the 7th fleet.
  + USS America, USS Blue Ridge, 7th Fleet flagship, aircraft carrier USS Theodore Roosevelt
* Sources:
  + <https://www.stripes.com/news/pacific/navy-deploys-medical-teams-aboard-ships-at-sea-to-batch-test-for-coronavirus-1.623344>

# Places doing pool testing:

* Nebraska tested 60 people, in groups of 12.
  + Cost-effective: Saved 50% of reagents
* Germany conducted some large-scale tests
  + Germany may begin doing pool testing at the national level in the next few weeks.
* Israel did some large scale tests, up to 64 people at one time.

# Misc Sources

* <https://www.wired.com/story/researchers-push-for-mass-blood-tests-as-a-covid-19-strategy/>
* <https://www.jpost.com/health-science/acceleration-in-multiple-coronavirus-tests-at-once-by-israel-research-team-621533>
* Israel develops tests for multiple people at once
* <https://www.washingtonpost.com/outlook/2020/03/31/coronavirus-testing-groups/>
* Nebraska, Israel, Germany experimenting with pool testing
* <https://www.technion.ac.il/en/2020/03/pooling-method-for-accelerated-testing-of-covid-19/>
* <https://aktuelles.uni-frankfurt.de/englisch/pool-testing-of-sars-cov-02-samples-increases-worldwide-test-capacities-many-times-over/>
* <https://www.forbes.com/sites/kotlikoff/2020/03/29/group-testing-is-our-secret-weapon-against-coronavirus/#2bb88fba36a6>
  + Claims Israel, Iceland, Nebraska are group testing
* [https://www.ketv.com/article/nebraska-public-health-lab-begins-pool-testing-covid-19-samples/31934880#](https://www.ketv.com/article/nebraska-public-health-lab-begins-pool-testing-covid-19-samples/31934880)
  + Nebraska’s State Public Health Lab is pool testing
    - Split 60 people into 5 groups of 12
    - Saved more than 50% of regeants
* <https://www.news18.com/news/india/may-extend-covid-19-lockdown-post-april-30-mumbai-to-be-under-red-zone-says-health-min-rajesh-tope-2574171.html>
  + India’s state of Maharashtra demands PM to allow pool testing
* <https://www.hindustantimes.com/india-news/govt-mulls-new-testing-approach/story-eD4ZiGlrdaynBRPSebpJoO.html>
  + India is considering pool testing
* <http://www.koreabiomed.com/news/articleView.html?idxno=7966>
  + Korea is considering pool testing for specific groups
* <https://www.hindustantimes.com/cities/we-will-begin-pool-testing-trials-to-speed-up-diagnosis-satyendar-jain/story-muy5XdftNphPykZYFdXAwK.html>
  + Germany is doing pool testing en masse?

# Key Search Terms:

* Group testing, pool testing, batch testing